

## **ABSTRACT OF THE DISCLOSURE**

Compensating for channel response in communications systems. An equalizing system includes a correlation block to calculate a correlation statistic from a received signal. The correlation statistic is used by a microcontroller to predict a channel response that includes a number of expansion coefficients. A steepest decent procedure is applied to the expansion coefficients. The steepest decent procedure may include, for example, a bias, or zeroing expansion coefficients by trial and error to remove ghost peaks. The steepest decent procedure produces a number of optimized expansion coefficients. The optimized expansion coefficients are used to create a number of filter coefficients. The filter coefficients are applied to an equalizer. The equalizer compensates for effects of the channel response to produce an equalized output signal.

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